UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/092,796 | 03/07/2002 | Jonathan D. Smith | RBC-101US | 3409 |

24314 7590 04/09/2003

JANSSON, SHUPE & MUNGER, LTD
245 MAIN STREET
RACINE, WI 53403

| EXAMINER |
|---|
| HAYES, BRET C |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3644 | 7 |

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/092,796 | SMITH, JONATHAN D. | |
| | Examiner | Art Unit | |
| | Bret C Hayes | 3644 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *21 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 11, 18, 39, 45 – 50 and 54 are rejected under 35 U.S.C. 102(b) as anticipated by Applicant's admitted Prior Art, namely, Stang, Elden J. and Birrenkott, Brian A., "Plant Growth Regulators Alter Fruit Set and Yield in Cranberry (*Vaccinium Macrocarpon Ait.*)", Acta Horticulturae 241, 1989, pp 277-283, hereinafter referred to as Stang et al.

3. Rejection under 35 USC 102(b): Stang et al. disclose: applying to cranberry plants a plant growth regulating compound such that the cranberries have a mature mass of less than about 0.75 grams/cranberry; the applying step being during the mid-bloom period; there being a single applying step; the composition being applied when about 50-100% of flowers have opened (bloom percentages); the active ingredient includes gibberellin; a solution including the composition is applied to the plants; the solution being an aqueous solution; the composition being $GA_3$; the concentration of composition within the solution is 25-100 ppm; and the application being by spraying.

4. Further, referring to Table 1, Stang et al. do state that the Mean fruit weight of the cranberries is 0.47g for $GA_3$ and 0.53g for $GA_{4+7}$ and *The American Heritage® Dictionary of the English Language, Fourth Edition* defines "mean" as:

2. *Mathematics.*

   a. A number that typifies a set of numbers, such as a geometric mean or an arithmetic mean.

   b. The average value of a set of numbers.

This would appear to indicate, mathematically, most (substantially every or all) of the cranberries having a weight less than about 0.75g, since both mean fruit weights are well below the claimed less than about 0.75g.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Rejection of claims 1 – 11, 18, 39, 45 – 50 and 54 under 35 USC 103(a): Stang et al. disclose the invention substantially as claimed, see paragraph 3 above. However, Stang et al. do not explicitly state that, "substantially every (all the) cranberry (cranberries) has (have) a mature mass of less than about 0.75 g/cranberry."

6. Claims 12 – 17, 19 – 38, 40 – 44 and 51 – 53 are rejected under 35 U.S.C. 103(a) as obvious over Stang et al. as applied to claims 1 – 11, 18, 39, 45 – 50 and 54 above.

7. Regarding claims 12 – 18, 20 – 37, 40 – 44, 51 and 53, Stang et al. inherently demonstrate that while the relationship between $GA_3$ ppm and Fruit Set (%), and $GA_3$ ppm and Fruit Weight (g) are (obviously?) not linear, it would be obvious to one of ordinary skill in the art, upon examination of Table 3, to discern the trend that increasing $GA_3$ ppm would tend to

increase Fruit Set (%) and decrease Fruit Weight (g). Stang et al. disclose the claimed invention except for the ranges specified in the claims. It would have been obvious to one having ordinary skill in the art at the time the invention was made to discern the trends, and further to experiment, in order to find the specific ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

8. Regarding claim 19 and 38, Stang et al. do not explicitly state the application being by ground-driven application equipment. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use ground-driven application equipment, since the equivalence of ground-driven application equipment and hand-carried application equipment, for example, for their use in the agricultural application art and the selection of any known equivalents to any spraying-type applicator equipment would be within the level of ordinary skill in the art.

***Response to Arguments***

9. Applicant's arguments filed 21 March 2003 have been fully considered but they are not persuasive.

10. Regarding the argument that Stang et al. show that, "every plant which was treated with a growth regulator has a majority of cranberries in the 0.6-1.0 gram range with some in the over 1.0 gram range," examiner agrees that this is where the greatest number of berries appears within the Table. However, as paragraph 4 above would indicate, the mean (or average) weight of the cranberries is significantly less than 0.75 g. If the mean weight of the cranberries of Stang et al.

were greater than 0.75 g, it would be indicative of most of the berries having a weight greater than 0.75 g. Since the mean weight is less, it proves that most of the berries weigh less than the 0.75 g. This would therefore indicate that the claimed limitation has been met.

11. The same would appear to hold true for Table 3, in which the Weight column, presumably "mean" as in Table 1, indicates that most of the berries weigh less than 0.8 g on the high end and 0.7 g on the low end.

12. The above would appear to indicate that Stang et al. do indeed disclose, suggest and imply by trend the substantially complete elimination of berries larger than 0.75 g. "Substantially," having no actual quantitative value, is defined as: to a great extent or degree. In the Tables presented by Stang et al., the worst ratio of the number of berries greater than 1.0 g to the overall number of berries appears to happen with $GA_{4+7}$ under the "2 repeat applications: Full bloom, FB+7 days" section of Table 3, in which the ratio of berries greater than 1.0 is 1:3, or 33%. The rest, for the most part hover around the mid to high teens in percentage. This would seem to be the argued, "substantially complete elimination."

13. Regarding the argument that Stang et al. do not show increasing fruit sets, in both Tables 1 and 3, it is shown that Fruit Sets doubled from the control group. Thus, one of ordinary skill in the art would be led to experiment to achieve better results. In regards to it being, "puzzling as to why, in the fifteen years between the Stang study and the filing of this application no one has attained either fruit sets of at least about 80% or yields of cranberries in which substantially 100% of the berries have a mature mass of less than about 0.75 grams," examiner cannot speak for a silent record – just because it has not been published or patented is no indication of the claimed invention's patentability.

***Conclusion***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication should be directed to Bret Hayes at telephone number (703) 306-0553. The examiner can normally be reached Monday through Friday from 7:00 am to 4:30 pm, Eastern Standard Time.

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Jordan, can be reached at (703) 306-4159. The fax number for this group is (703) 305-7687.

Charles T. Jordan

CHARLES T. JORDAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

bh

4/7/03